

ABSTRACT

An electrical power plant that includes a fuel cell and at least one recycle system for recycling at least a first reactant, for reuse by the fuel cell. The fuel cell discharges a first exit stream that includes the first reactant and inerts. The recycle system comprises a separator that receives the first exit stream from the fuel cell and separates the first reactant contained in the first exit stream from inerts contained in the exit stream. The separated first reactant is directed back to the fuel cell for reuse. The remaining inerts and unseparated first reactant are discharged by the separator and then recirculated back into the separator, without progressing through the fuel cell, to separate additional first reactant from the inerts.